

SGCN and Habitat Stressors

Level 1 Threat Pollution

Level 2 Threat: Industrial and Military Effluents

Description: Water-borne pollutants from industrial and military sources including mining, energy production, and other resource extraction industries that include nutrients, toxic chemicals and/or sediments

Species Associated With This Stressor:		Total SGCN: 1: 23 2: 40 3:
Class	<i>Actinopterygii</i> (Ray-finned Fishes)	SGCN Category
Species: <i>Alosa pseudoharengus</i> (Alewife)		2
Severity:	Moderate Severity	Actionability: Actionable with difficulty
Notes:	Non-point source pollution (heavy metals and nutrient inputs) has been directly related to declining runs. Likelihood is high and increasing (high certainty), current spatial extent is a few locations, , actionability is low because further regulation of effluents is not likely within next 10 years in Maine.	
Species: <i>Alosa sapidissima</i> (American Shad)		1
Severity:	Severe	Actionability: Actionable with difficulty
Notes:	Non-point source pollution (heavy metals and nutrient inputs) has been directly related to declining runs. Likelihood is high and increasing (high certainty), current spatial extent is a few locations, , actionability is low because further regulation of effluents is not likely within next 10 years in Maine.	
Species: <i>Acipenser oxyrinchus</i> (Atlantic Sturgeon)		1
Severity:	Moderate Severity	Actionability: Actionable with difficulty
Notes:	Non-point source pollution (heavy metals and nutrient inputs) has been directly related to declining runs. Likelihood is high and increasing (high certainty), current spatial extent is a few locations, , actionability is low because further regulation of effluents is not likely within next 10 years in Maine.	
Species: <i>Alosa aestivalis</i> (Blueback Herring)		1
Severity:	Moderate Severity	Actionability: Actionable with difficulty
Notes:	Non-point source pollution (heavy metals and nutrient inputs) has been directly related to declining runs. Likelihood is high and increasing (high certainty), current spatial extent is a few locations, , actionability is low because further regulation of effluents is not likely within next 10 years in Maine.	
Species: <i>Osmerus mordax</i> (Rainbow Smelt)		1
Severity:	Severe	Actionability: Actionable with difficulty
Notes:	Non-point source pollution (heavy metals and nutrient inputs) has been directly related to declining smelt runs. Likelihood is high and increasing (high certainty), current spatial extent is a few locations, , actionability is low because further regulation of effluents is not likely within next 10 years in Maine.	
Species: <i>Acipenser brevirostrum</i> (Shortnose Sturgeon)		1
Severity:	Moderate Severity	Actionability: Actionable with difficulty
Notes:	Non-point source pollution (heavy metals and nutrient inputs) has been directly related to declining runs. Likelihood is high and increasing (high certainty), current spatial extent is a few locations, , actionability is low because further regulation of effluents is not likely within next 10 years in Maine.	
Species: <i>Morone saxatilis</i> (Striped Bass)		2
Severity:	Moderate Severity	Actionability: Actionable with difficulty
Notes:	Non-point source pollution (heavy metals and nutrient inputs) has been directly related to declining runs. Likelihood is high and increasing (high certainty), current spatial extent is a few locations, , actionability is low because further regulation of effluents is not likely within next 10 years in Maine.	

Class	<i>Asteroidea</i> (Sea Stars)	SGCN Category
Species:	<i>Asterias rubens</i> (Common Sea Star)	2
Severity:	Severe	Actionability: Moderately actionable
Notes:	Oil spills are toxic to species with intertidal distributions. Local scale spills have an unpredictable likelihood and actionability is moderate and influenced by response time to spills.	

SGCN and Habitat Stressors

Level 1 Threat Pollution

Level 2 Threat: Industrial and Military Effluents

Class	<i>Asteroidea</i> (Sea Stars)	SGCN Category
Species: <i>Crossaster papposus</i> (Common Sun Star)		2
Severity: Severe	Actionability: Moderately actionable	
Notes: Oil spills are toxic to species with intertidal distributions. Local scale spills have an unpredictable likelihood and actionability is moderate and influenced by response time to spills.		
Species: <i>Asterias forbesi</i> (Forbes's Starfish)		2
Severity: Severe	Actionability: Moderately actionable	
Notes: Oil spills are toxic to species with intertidal distributions. Local scale spills have an unpredictable likelihood and actionability is moderate and influenced by response time to spills.		
Species: <i>Stephanasterias albula</i> (White Sea Star)		2
Severity: Severe	Actionability: Moderately actionable	
Notes: Oil spills are toxic to species with intertidal distributions. Local scale spills have an unpredictable likelihood and actionability is moderate and influenced by response time to spills.		
Class	<i>Aves</i> (Birds)	SGCN Category
Species: <i>Sterna paradisaea</i> (Arctic Tern)		1
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Oils spills near nesting islands has been shown to be an issue		
Species: <i>Fratercula arctica</i> (Atlantic Puffin)		2
Severity: Moderate Severity	Actionability: Actionable with difficulty	
Notes: Oil spills around nesting islands or in offshore open ocean habitats could be a significant threat		
Species: <i>Bucephala islandica</i> (Barrow's Goldeneye)		1
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Oil Spills in hotspot locations could be detrimental to the wintering population		
Species: <i>Sterna hirundo</i> (Common Tern)		2
Severity: Moderate Severity	Actionability: Actionable with difficulty	
Notes: Oil spills around nesting islands or staging areas can be a significant problem		
Species: <i>Phalacrocorax carbo</i> (Great Cormorant)		1
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Oil spills		
Species: <i>Aythya marila</i> (Greater Scaup)		2
Severity: Moderate Severity	Actionability: Moderately actionable	
Species: <i>Histrionicus histrionicus</i> (Harlequin Duck)		1
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Oil spill from tankers and other ships using shipping lanes located near harlequin habitats, may be prevented by changing location of shipping lanes. Impacts may be reversed or minimized with clean up efforts and compensation.		
Species: <i>Sternula antillarum</i> (Least Tern)		1
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Habitat loss from oil/chemical spills		
Species: <i>Ammodramus nelsoni</i> (Nelson's Sparrow)		2
Severity: Moderate Severity	Actionability: Highly actionable	
Notes: Oil spills; booming strategies		

SGCN and Habitat Stressors

Level 1 Threat Pollution

Level 2 Threat: Industrial and Military Effluents

Class	Aves (Birds)	SGCN Category
Species: <i>Falco peregrinus</i> (Peregrine Falcon)		1
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Important to avoid applications of pesticides around occupied eyeries during the nesting season and monitor prevalence of PCB's, PBDE's, mercury, lead, and implications to survival and reproductive success.		
Species: <i>Charadrius melodus</i> (Piping Plover)		1
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Habitat loss from oil/chemical spills		
Species: <i>Calidris maritima</i> (Purple Sandpiper)		1
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Impacts may be mitigated through oil spill clean up and compensation. Prevention may occur through contingency planning and environmental permit review.		
Species: <i>Alca torda</i> (Razorbill)		2
Severity: Moderate Severity	Actionability: Actionable with difficulty	
Notes: Oil spills around nesting islands or in the open ocean		
Species: <i>Calidris canutus rufa</i> (Red Knot)		1
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Impacts may be minimized using regulation, contingency planning and clean - up.		
Species: <i>Phalaropus lobatus</i> (Red-necked Phalarope)		2
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Impacts from oil spills can be mitigated through clean up and compensation. Prevention of chemical spills may occur through contingency planning and environmental review.		
Species: <i>Sterna dougallii</i> (Roseate Tern)		1
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Oil spills around significant nesting areas have been shown to be an imminent threat to Roseate Tern breeding populations as was experienced in Massachusetts		
Species: <i>Arenaria interpres</i> (Ruddy Turnstone)		2
Severity: Moderate Severity	Actionability: Actionable with difficulty	
Notes: Impacts may be mitigated through oil spill clean-up and compensation. Prevention of industrial spills may occur through environmental permit regulation and contingency planning.		
Species: <i>Ammodramus caudacutus</i> (Saltmarsh Sparrow)		1
Severity: Moderate Severity	Actionability: Highly actionable	
Notes: Oil Spills; booming strategies & response planning		
Species: <i>Calidris alba</i> (Sanderling)		2
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes: Oil spill prevention can occur through contingency planning and environmental permit review. Impacts can be minimized through clean up efforts and compensation.		
Species: <i>Calidris pusilla</i> (Semipalmated Sandpiper)		2
Severity: Moderate Severity	Actionability: Actionable with difficulty	
Notes: Mitigation from oil spill can occur through clean up and compensation. Prevention of chemical spills can occur through contingency planning and environmental permit review.		

SGCN and Habitat Stressors

Level 1 Threat Pollution

Level 2 Threat: Industrial and Military Effluents

Class	Aves (Birds)	SGCN Category
	Species: <i>Numenius phaeopus</i> (Whimbrel) Severity: Moderate Severity Actionability: Moderately actionable Notes: Impacts from oil and chemical spills can be mitigated through regulation and compensation. Prevention can occur through contingency planning and environmental permit review.	2
Class	Bivalvia (Marine And Freshwater Molluscs)	SGCN Category
	Species: <i>Zirfaea crispata</i> (Atlantic Great Piddock) Severity: Severe Actionability: Moderately actionable Notes: Oil spills are toxic to species with intertidal distributions. Local scale spills have an unpredictable likelihood and actionability is moderate and influenced by response time to spills.	2
	Species: <i>Alasmidonta varicosa</i> (Brook Floater) Severity: Moderate Severity Actionability: Moderately actionable Notes: Impacts to water quality from point and non-point sources; direct impacts of toxins to mussels and/or fish hosts	1
	Species: <i>Leptodea ochracea</i> (Tidewater Mucket) Severity: Moderate Severity Actionability: Moderately actionable Notes: Impacts to water quality from point and non-point sources; direct impacts of toxins to mussels and/or fish hosts	1
	Species: <i>Lampsilis cariosa</i> (Yellow Lampmussel) Severity: Moderate Severity Actionability: Moderately actionable Notes: Impacts to water quality from point and non-point sources; direct impacts of toxins to mussels and/or fish hosts	1
Class	Chondrichthyes (Sharks, Rays, And Skates)	SGCN Category
	Species: <i>Dipturus laevis</i> (Barndoor Skate) Severity: Moderate Severity Actionability: Moderately actionable Notes: Many elasmobranch species use inshore coastal and estuarine habitats as a safe place for finding food, giving birth and growing up away from predators and competitors. This means that they are vulnerable to negative changes in their habitat. For example, sharks, skates and rays are very susceptible to pollution and environmental contamination. Pollution in the ocean has either filtered from land activities or has been directly deposited into the seas. As apex predators with slow growth, they accumulate all the pollutants and toxins in the environment and bioaccumulating all the toxins of their prey. Chemical pollution, in the form of mercury, DDT, organochlorines, etc., has been documented in several shark populations in close proximity to areas of human populations. This could become a significant threat as we learn more about movement patterns and habitat usages of skates	2
	Species: <i>Lamna nasus</i> (Porbeagle) Severity: Moderate Severity Actionability: Moderately actionable Notes: Shark species use inshore coastal and estuarine habitats as a safe place for finding food, giving birth and growing up away from predators and competitors. This means that they are vulnerable to negative changes in their habitat. For example, sharks, skates and rays are very susceptible to pollution and environmental contamination. Pollution in the ocean has either filtered from land activities or has been directly deposited into the seas. As apex predators with slow growth, they accumulate all the pollutants and toxins in the environment and bioaccumulating all the toxins of their prey. Chemical pollution, in the form of mercury, DDT, organochlorines, etc., has been documented in several shark populations in close proximity to areas of human populations. This could become a significant threat as we learn more about movement patterns and habitat usages of skates	2

SGCN and Habitat Stressors

Level 1 Threat Pollution

Level 2 Threat: Industrial and Military Effluents

Class	<i>Chondrichthyes</i> (Sharks, Rays, And Skates)	SGCN Category
Species: <i>Isurus oxyrinchus</i> (Shortfin Mako)		2
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes:	Shark species use inshore coastal and estuarine habitats as a safe place for finding food, giving birth and growing up away from predators and competitors. This means that they are vulnerable to negative changes in their habitat. For example, sharks, skates and rays are very susceptible to pollution and environmental contamination. Pollution in the ocean has either filtered from land activities or has been directly deposited into the seas. As apex predators with slow growth, they accumulate all the pollutants and toxins in the environment and bioaccumulating all the toxins of their prey. Chemical pollution, in the form of mercury, DDT, organochlorines, etc., has been documented in several shark populations in close proximity to areas of human populations. This could become a significant threat as we learn more about movement patterns and habitat usages of skates	
Species: <i>Malacoraja senta</i> (Smooth Skate)		2
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes:	Many elasmobranch species use inshore coastal and estuarine habitats as a safe place for finding food, giving birth and growing up away from predators and competitors. This means that they are vulnerable to negative changes in their habitat. For example, sharks, skates and rays are very susceptible to pollution and environmental contamination. Pollution in the ocean has either filtered from land activities or has been directly deposited into the seas. As apex predators with slow growth, they accumulate all the pollutants and toxins in the environment and bioaccumulating all the toxins of their prey. Chemical pollution, in the form of mercury, DDT, organochlorines, etc., has been documented in several shark populations in close proximity to areas of human populations. This could become a significant threat as we learn more about movement patterns and habitat usages of skates	
Species: <i>Amblyraja radiata</i> (Thorny Skate)		2
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes:	Many elasmobranch species use inshore coastal and estuarine habitats as a safe place for finding food, giving birth and growing up away from predators and competitors. This means that they are vulnerable to negative changes in their habitat. For example, sharks, skates and rays are very susceptible to pollution and environmental contamination. Pollution in the ocean has either filtered from land activities or has been directly deposited into the seas. As apex predators with slow growth, they accumulate all the pollutants and toxins in the environment and bioaccumulating all the toxins of their prey. Chemical pollution, in the form of mercury, DDT, organochlorines, etc., has been documented in several shark populations in close proximity to areas of human populations. This could become a significant threat as we learn more about movement patterns and habitat usages of skates	
Species: <i>Leucoraja ocellata</i> (Winter Skate)		2
Severity: Moderate Severity	Actionability: Moderately actionable	
Notes:	Many elasmobranch species use inshore coastal and estuarine habitats as a safe place for finding food, giving birth and growing up away from predators and competitors. This means that they are vulnerable to negative changes in their habitat. For example, sharks, skates and rays are very susceptible to pollution and environmental contamination. Pollution in the ocean has either filtered from land activities or has been directly deposited into the seas. As apex predators with slow growth, they accumulate all the pollutants and toxins in the environment and bioaccumulating all the toxins of their prey. Chemical pollution, in the form of mercury, DDT, organochlorines, etc., has been documented in several shark populations in close proximity to areas of human populations. This could become a significant threat as we learn more about movement patterns and habitat usages of skates	
Class	<i>Echinoidea</i> (Sea Urchins)	SGCN Category

SGCN and Habitat Stressors

Level 1 Threat Pollution

Level 2 Threat: Industrial and Military Effluents

Class	<i>Echinoidea</i> (Sea Urchins)	SGCN Category
Species: <i>Strongylocentrotus droebachiensis</i> (Green Sea Urchin)		2
Severity: Severe	Actionability: Moderately actionable	
Notes: Oil spills are toxic to species with intertidal distributions. Local scale spills have an unpredictable likelihood and actionability is moderate and influenced by response time to spills.		
Class	<i>Gastropoda</i> (Aquatic And Terrestrial Snails)	SGCN Category
Species: <i>Boreotrophon clathratus</i> (Clathrate Trophon)		2
Severity: Severe	Actionability: Moderately actionable	
Notes: Oil spills are toxic to species with intertidal distributions. Local scale spills have an unpredictable likelihood and actionability is moderate and influenced by response time to spills.		
Species: <i>Colus pygmaeus</i> (Colus Snail)		2
Severity: Severe	Actionability: Moderately actionable	
Notes: Oil spills are toxic to species with intertidal distributions. Local scale spills have an unpredictable likelihood and actionability is moderate and influenced by response time to spills.		
Species: <i>Boreotrophon truncatus</i> (Murex)		2
Severity: Severe	Actionability: Moderately actionable	
Notes: Oil spills are toxic to species with intertidal distributions. Local scale spills have an unpredictable likelihood and actionability is moderate and influenced by response time to spills.		
Class	<i>Holothuroidea</i> (Sea Cucumbers)	SGCN Category
Species: <i>Cucumaria frondosa</i> (Orange-footed Sea Cucumber)		2
Severity: Severe	Actionability: Moderately actionable	
Notes: Oil spills are toxic to species with intertidal distributions. Local scale spills have an unpredictable likelihood and actionability is moderate and influenced by response time to spills.		
Species: <i>Psolus fabricii</i> (Psolus)		2
Severity: Severe	Actionability: Moderately actionable	
Notes: Oil spills are toxic to species with intertidal distributions. Local scale spills have an unpredictable likelihood and actionability is moderate and influenced by response time to spills.		
Species: <i>Psolus phantapus</i> (Psolus)		2
Severity: Severe	Actionability: Moderately actionable	
Notes: Oil spills are toxic to species with intertidal distributions. Local scale spills have an unpredictable likelihood and actionability is moderate and influenced by response time to spills.		
Species: <i>Thyonidium drummondii</i> (Sea Cucumber)		2
Severity: Severe	Actionability: Moderately actionable	
Notes: Oil spills are toxic to species with intertidal distributions. Local scale spills have an unpredictable likelihood and actionability is moderate and influenced by response time to spills.		
Class	<i>Mammalia</i> (Mammals)	SGCN Category
Species: <i>Balaenoptera musculus</i> (Blue Whale)		2
Severity: Moderate Severity	Actionability: Actionable with difficulty	
Notes: Pollution sources can bioaccumulate up the food chain and some fish eating marine mammals are at the top of the food chain and susceptible to toxins. There is a low likelihood that legislation will improve this in the short term.		

SGCN and Habitat Stressors

Level 1 Threat Pollution

Level 2 Threat: Industrial and Military Effluents

Class	<i>Mammalia</i> (Mammals)	SGCN Category
Species: <i>Balaenoptera physalus</i> (Finback Whale)		2
Severity: Moderate Severity	Actionability: Actionable with difficulty	
Notes: Pollution sources can bioaccumulate up the food chain and some fish eating marine mammals are at the top of the food chain and susceptible to toxins. There is a low likelihood that legislation will improve this in the short term.		
Species: <i>Megaptera novaeangliae</i> (Humpback Whale)		1
Severity: Moderate Severity	Actionability: Actionable with difficulty	
Notes: Pollution sources can bioaccumulate up the food chain and some fish eating marine mammals are at the top of the food chain and susceptible to toxins. There is a low likelihood that legislation will improve this in the short term.		
Species: <i>Eubalaena glacialis</i> (North Atlantic Right Whale)		1
Severity: Moderate Severity	Actionability: Actionable with difficulty	
Notes: Pollution sources can bioaccumulate up the food chain and some fish eating marine mammals are at the top of the food chain and susceptible to toxins. There is a low likelihood that legislation will improve this in the short term.		
Species: <i>Balaenoptera borealis</i> (Sei Whale)		2
Severity: Moderate Severity	Actionability: Actionable with difficulty	
Notes: Pollution sources can bioaccumulate up the food chain and some fish eating marine mammals are at the top of the food chain and susceptible to toxins. There is a low likelihood that legislation will improve this in the short term.		
Species: <i>Physeter macrocephalus</i> (Sperm Whale)		2
Severity: Moderate Severity	Actionability: Actionable with difficulty	
Notes: Pollution sources can bioaccumulate up the food chain and some fish eating marine mammals are at the top of the food chain and susceptible to toxins. There is a low likelihood that legislation will improve this in the short term.		
Class	<i>Merostomata</i> (Horseshoe Crabs And Sea Scorpions)	SGCN Category
Species: <i>Limulus polyphemus</i> (Horseshoe Crab)		1
Severity: Severe	Actionability: Moderately actionable	
Notes: Industrial development has been statistically correlated with malformed horseshoe crab embryos. The specific causes of impact are increased non-point source pollution (heavy metals; mercury and tributyltin). Toxins can bioaccumulate in eggs fed on by sea birds. Likelihood is high. Actionability is moderate, i.e. the threat can be minimized in newly developing areas. Oil spills are toxic to species with intertidal distributions. Local scale spills have an unpredictable likelihood and actionability is moderate and influenced by response time to spills.		
Class	<i>Ophiuroidea</i> (Brittle Stars)	SGCN Category
Species: <i>Gorgonocephalus arcticus</i> (Northern Basket Starfish)		2
Severity: Severe	Actionability: Moderately actionable	
Notes: Oil spills are toxic to species with intertidal distributions. Local scale spills have an unpredictable likelihood and actionability is moderate and influenced by response time to spills.		
Class	<i>Reptilia</i> (Reptiles)	SGCN Category

SGCN and Habitat Stressors

Level 1 Threat Pollution

Level 2 Threat: Industrial and Military Effluents

Class	<i>Reptilia</i> (Reptiles)	SGCN Category
Species: <i>Chelonia mydas</i> (Green Seaturtle)		2
Severity: Moderate Severity	Actionability: Actionable with difficulty	
Notes: Sea turtles are susceptible to toxins in coastal environments. There is a low likelihood that legislation will improve this in the short term.		
Species: <i>Lepidochelys kempii</i> (Kemp's Ridley Seaturtle)		2
Severity: Moderate Severity	Actionability: Actionable with difficulty	
Notes: Sea turtles are susceptible to toxins in coastal environments. There is a low likelihood that legislation will improve this in the short term.		
Species: <i>Dermochelys coriacea</i> (Leatherback Seaturtle)		1
Severity: Moderate Severity	Actionability: Actionable with difficulty	
Notes: Sea turtles are susceptible to toxins in coastal environments. There is a low likelihood that legislation will improve this in the short term.		
Species: <i>Caretta caretta</i> (Loggerhead Seaturtle)		2
Severity: Moderate Severity	Actionability: Actionable with difficulty	
Notes: Sea turtles are susceptible to toxins in coastal environments. There is a low likelihood that legislation will improve this in the short term.		
Class	<i>Rhynchonellata</i> (Brachiopods)	SGCN Category
Species: <i>Terebratulina septentrionalis</i> (Lamp Shell)		2
Severity: Severe	Actionability: Moderately actionable	
Notes: Oil spills are toxic to species with intertidal distributions. Local scale spills have an unpredictable likelihood and actionability is moderate and influenced by response time to spills.		
Habitats Associated With This Stressor:		
Macrogroup	Central Hardwood Swamp	
Habitat System Name:	North-Central Interior Wet Flatwoods	
Notes:	Possible oil-spill from pipeline or other source, pollution from industrial sites.	
Macrogroup	Coastal Grassland & Shrubland	
Habitat System Name:	Northern Atlantic Coastal Plain Dune and Maritime Grassland	
Notes:	Oil/ gas spills from ships and other sources	
Habitat System Name:	Northern Atlantic Coastal Plain Sandy Beach	
Notes:	Oil/ gas spills from ships and other sources	
Macrogroup	Intertidal Bedrock	
Habitat System Name:	High Intertidal	
Notes:	Though this threat can be reduced with the implementation of best management practices, runoff, oil spills, water uptake and discharge, and other industrial activities can lead to poor water quality, and reduced fitness and/or mortality, especially during emergency response events (e.g. oil spills). The effects may be long lasting.	
Habitat System Name:	Low-Intertidal	
Notes:	Though this threat can be reduced with the implementation of best management practices, runoff, oil spills, water uptake and discharge, and other industrial activities can lead to poor water quality, and reduced fitness and/or mortality, especially during emergency response events (e.g. oil spills). The effects may be long lasting.	

SGCN and Habitat Stressors

Level 1 Threat Pollution

Level 2 Threat: Industrial and Military Effluents

Macrogroup Intertidal Bedrock

Habitat System Name: Mid-Intertidal

Notes: Though this threat can be reduced with the implementation of best management practices, runoff, oil spills, water uptake and discharge, and other industrial activities can lead to poor water quality, and reduced fitness and/or mortality, especially during emergency response events (e.g. oil spills). The effects may be long lasting.

Macrogroup Intertidal Gravel Shore

Habitat System Name: High Intertidal

Notes: Though this threat can be reduced with the implementation of best management practices, runoff, oil spills, water uptake and discharge, and other industrial activities can lead to poor water quality, and reduced fitness and/or mortality, especially during emergency response events (e.g. oil spills). The effects may be long lasting.

Habitat System Name: Lower Intertidal

Notes: Though this threat can be reduced with the implementation of best management practices, runoff, oil spills, water uptake and discharge, and other industrial activities can lead to poor water quality, and reduced fitness and/or mortality, especially during emergency response events (e.g. oil spills). The effects may be long lasting.

Habitat System Name: Mid-Intertidal

Notes: Though this threat can be reduced with the implementation of best management practices, runoff, oil spills, water uptake and discharge, and other industrial activities can lead to poor water quality, and reduced fitness and/or mortality, especially during emergency response events (e.g. oil spills). The effects may be long lasting.

Macrogroup Intertidal Mollusc Reefs

Habitat System Name: Gastropod Reef

Notes: Though this threat can be reduced with the implementation of best management practices, runoff, oil spills, water uptake and discharge, and other industrial activities can lead to poor water quality, and reduced fitness and/or mortality, especially during emergency response events (e.g. oil spills). The effects may be long lasting.

Habitat System Name: Mussel Reef

Notes: Though this threat can be reduced with the implementation of best management practices, runoff, oil spills, water uptake and discharge, and other industrial activities can lead to poor water quality, and reduced fitness and/or mortality, especially during emergency response events (e.g. oil spills). The effects may be long lasting.

Habitat System Name: Oyster Reef

Notes: Though this threat can be reduced with the implementation of best management practices, runoff, oil spills, water uptake and discharge, and other industrial activities can lead to poor water quality, and reduced fitness and/or mortality, especially during emergency response events (e.g. oil spills). The effects may be long lasting.

Macrogroup Intertidal Mudflat

Habitat System Name: Freshwater Tidal Marsh

Notes: Though this threat can be reduced with the implementation of best management practices, runoff, oil spills, water uptake and discharge, and other industrial activities can lead to poor water quality, and reduced fitness and/or mortality, especially during emergency response events (e.g. oil spills). The effects may be long lasting.

Habitat System Name: Non-Vascular Mudflat

Notes: Though this threat can be reduced with the implementation of best management practices, runoff, oil spills, water uptake and discharge, and other industrial activities can lead to poor water quality, and reduced fitness and/or mortality, especially during emergency response events (e.g. oil spills). The effects may be long lasting.

Habitat System Name: Submerged Aquatic Vegetation

Notes: Though this threat can be reduced with the implementation of best management practices, runoff, oil spills, water uptake and discharge, and other industrial activities can lead to poor water quality, and reduced fitness and/or mortality, especially during emergency response events (e.g. oil spills). The effects may be long lasting.

Macrogroup Intertidal Sandy Shore

SGCN and Habitat Stressors

Level 1 Threat Pollution

Level 2 Threat: Industrial and Military Effluents

Macrogroup Intertidal Sandy Shore

Habitat System Name: Sand Beach

Notes: Though this threat can be reduced with the implementation of best management practices, runoff, oil spills, water uptake and discharge, and other industrial activities can lead to poor water quality, and reduced fitness and/or mortality, especially during emergency response events (e.g. oil spills). The effects may be long lasting.

Habitat System Name: Sand Flat

Notes: Though this threat can be reduced with the implementation of best management practices, runoff, oil spills, water uptake and discharge, and other industrial activities can lead to poor water quality, and reduced fitness and/or mortality, especially during emergency response events (e.g. oil spills). The effects may be long lasting.

Habitat System Name: Submerged Aquatic Vegetation

Notes: Though this threat can be reduced with the implementation of best management practices, runoff, oil spills, water uptake and discharge, and other industrial activities can lead to poor water quality, and reduced fitness and/or mortality, especially during emergency response events (e.g. oil spills). The effects may be long lasting.

Macrogroup Intertidal Tidal Marsh (peat-forming)

Habitat System Name: Acadian Coastal Salt Marsh

Notes: Freshwater tidal marshes might be impacted more than salt marshes where ocean can make pollutants more diffuse. Impacts are likely to marine/aquatic spp.

Habitat System Name: Coastal Plain Tidal Marsh

Notes: Freshwater tidal marshes might be impacted more than salt marshes where ocean can make pollutants more diffuse. Impacts are likely to marine/aquatic spp.

Macrogroup Intertidal Water Column

Habitat System Name: Confined Channel

Notes: Though this threat can be reduced with the implementation of best management practices, runoff, oil spills, water uptake and discharge, and other industrial activities can lead to poor water quality, and reduced fitness and/or mortality, especially during emergency response events (e.g. oil spills). The effects may be long lasting.

Habitat System Name: Embayment

Notes: Though this threat can be reduced with the implementation of best management practices, runoff, oil spills, water uptake and discharge, and other industrial activities can lead to poor water quality, and reduced fitness and/or mortality, especially during emergency response events (e.g. oil spills). The effects may be long lasting.

Habitat System Name: Exposed Shore

Notes: Though this threat can be reduced with the implementation of best management practices, runoff, oil spills, water uptake and discharge, and other industrial activities can lead to poor water quality, and reduced fitness and/or mortality, especially during emergency response events (e.g. oil spills). The effects may be long lasting.

Macrogroup Northeastern Floodplain Forest

Habitat System Name: Laurentian-Acadian Floodplain Systems

Notes: Industrial effluents on major rivers much reduced from decades ago

Macrogroup Rivers and Streams

Habitat System Name: Ephemeral

Habitat System Name: Headwaters and Creeks

Habitat System Name: Large River

Habitat System Name: Medium River

Habitat System Name: Small River

Macrogroup Rocky Coast

SGCN and Habitat Stressors

Level 1 Threat Pollution

Level 2 Threat: Industrial and Military Effluents

Macrogroup Rocky Coast

Habitat System Name: Acadian-North Atlantic Rocky Coast

Notes: Potential for oil spills

Habitat System Name: North Atlantic Cobble Shore

Notes: Potential for oil spills

Macrogroup Subtidal Bedrock Bottom

Habitat System Name: Bedrock

Notes: Release of effluents may contain high concentrations of toxic contaminants, etc. largely effects nearshore habitat, where impact can be long term. Oil spills can effect nearshore or offshore environments and can be either localized (if contained or small), or pervasive (if large or dispersants are used).

Habitat System Name: Erect Epifauna

Notes: Release of effluents may contain high concentrations of toxic contaminants, etc. largely effects nearshore habitat, where impact can be long term. Oil spills can effect nearshore or offshore environments and can be either localized (if contained or small), or pervasive (if large or dispersants are used).

Habitat System Name: Kelp Bed

Notes: Release of effluents may contain high concentrations of toxic contaminants, etc. largely effects nearshore habitat, where impact can be long term. Oil spills can effect nearshore or offshore environments and can be either localized (if contained or small), or pervasive (if large or dispersants are used).

Macrogroup Subtidal Coarse Gravel Bottom

Habitat System Name: Coarse Gravel

Notes: Release of effluents may contain high concentrations of toxic contaminants, etc. largely effects nearshore habitat, where impact can be long term. Oil spills can effect nearshore or offshore environments and can be either localized (if contained or small), or pervasive (if large or dispersants are used).

Habitat System Name: Erect Epifauna

Notes: Release of effluents may contain high concentrations of toxic contaminants, etc. largely effects nearshore habitat, where impact can be long term. Oil spills can effect nearshore or offshore environments and can be either localized (if contained or small), or pervasive (if large or dispersants are used).

Habitat System Name: Kelp Bed

Notes: Release of effluents may contain high concentrations of toxic contaminants, etc. largely effects nearshore habitat, where impact can be long term. Oil spills can effect nearshore or offshore environments and can be either localized (if contained or small), or pervasive (if large or dispersants are used).

Macrogroup Subtidal Mollusc Reefs

Habitat System Name: Gastropod Reef

Notes: Release of effluents may contain high concentrations of toxic contaminants, etc. largely effects nearshore habitat, where impact can be long term. Oil spills can effect nearshore or offshore environments and can be either localized (if contained or small), or pervasive (if large or dispersants are used).

Habitat System Name: Mussel Reef

Notes: Release of effluents may contain high concentrations of toxic contaminants, etc. largely effects nearshore habitat, where impact can be long term. Oil spills can effect nearshore or offshore environments and can be either localized (if contained or small), or pervasive (if large or dispersants are used).

Habitat System Name: Oyster Reef

Notes: Release of effluents may contain high concentrations of toxic contaminants, etc. largely effects nearshore habitat, where impact can be long term. Oil spills can effect nearshore or offshore environments and can be either localized (if contained or small), or pervasive (if large or dispersants are used).

Macrogroup Subtidal Mud Bottom

SGCN and Habitat Stressors

Level 1 Threat Pollution

Level 2 Threat: Industrial and Military Effluents

Macrogroup Subtidal Mud Bottom

Habitat System Name: Submerged Aquatic Vegetation

Notes: Release of effluents may contain high concentrations of toxic contaminants, etc. largely effects nearshore habitat, where impact can be long term. Oil spills can effect nearshore or offshore environments and can be either localized (if contained or small), or pervasive (if large or dispersants are used).

Habitat System Name: Unvegetated

Notes: Release of effluents may contain high concentrations of toxic contaminants, etc. largely effects nearshore habitat, where impact can be long term. Oil spills can effect nearshore or offshore environments and can be either localized (if contained or small), or pervasive (if large or dispersants are used).

Macrogroup Subtidal Pelagic (Water Column)

Habitat System Name: Confined Channel

Notes: Release of effluents may contain high concentrations of toxic contaminants, etc. largely effects nearshore habitat, where impact can be long term. Oil spills can effect nearshore or offshore environments and can be either localized (if contained or small), or pervasive (if large or dispersants are used).

Habitat System Name: Nearshore

Notes: Release of effluents may contain high concentrations of toxic contaminants, etc. largely effects nearshore habitat, where impact can be long term. Oil spills can effect nearshore or offshore environments and can be either localized (if contained or small), or pervasive (if large or dispersants are used).

Habitat System Name: Offshore

Notes: Release of effluents may contain high concentrations of toxic contaminants, etc. largely effects nearshore habitat, where impact can be long term. Oil spills can effect nearshore or offshore environments and can be either localized (if contained or small), or pervasive (if large or dispersants are used).

Habitat System Name: Upwelling Zones

Notes: Release of effluents may contain high concentrations of toxic contaminants, etc. largely effects nearshore habitat, where impact can be long term. Oil spills can effect nearshore or offshore environments and can be either localized (if contained or small), or pervasive (if large or dispersants are used).

Macrogroup Subtidal Sand Bottom

Habitat System Name: Submerged Aquatic Vegetation

Notes: Release of effluents may contain high concentrations of toxic contaminants, etc. largely effects nearshore habitat, where impact can be long term. Oil spills can effect nearshore or offshore environments and can be either localized (if contained or small), or pervasive (if large or dispersants are used).

Habitat System Name: Unvegetated

Notes: Release of effluents may contain high concentrations of toxic contaminants, etc. largely effects nearshore habitat, where impact can be long term. Oil spills can effect nearshore or offshore environments and can be either localized (if contained or small), or pervasive (if large or dispersants are used).

SGCN and Habitat Stressors

Level 1 Threat Pollution

Level 2 Threat: Industrial and Military Effluents

The Wildlife Action Plan was developed through a lengthy participatory process with state agencies, targeted conservation partners, and the general public. The Plan is non-regulatory. The species, stressors, and voluntary conservation actions identified in the Plan complement, but do not replace, existing work programs and priorities by state agencies and partners.